OCTOBER, MDCCCLIX.

THE ZOOLOGIST:

A

POPULAR MONTHLY MAGAZINE

OF

NATURAL HISTORY,

AND

JOURNAL FOR RECORDING FACTS AND ANECDOTES

RELATING TO

QUADRUPEDS, BIRDS, REPTILES, FISHES, ANNELIDES,
INSECTS, WORMS, ZOOPHYTES, &c.

THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,
MIGRATIONS, NESTS AND YOUNG.

No. CCVIII.

LONDON:
JOHN VAN VOORST, PATERNOSTER ROW.

Price ONE SHILLING.

Ants store the Seeds of Violets.—Is it quite well known, and therefore a "mare's nest" of mine, that the common garden ants collect violet seed in and around their subterranean galleries? I have a large bank of violets facing the "sweet South," and all the ants' nests within some yards are covered with the violet-seeds (which ripen about this time). The seeds are white, hard and shining, and very like the pupæ of the insect. I watched the insects bringing out the seeds from their holes on fine days, as they do their pupæ. Can this be a case of mistaken instinct? They collect them so abundantly as to be a convenient source from whence to preserve the seed if wanted. —*J. B. Spencer; 9, Kidbrooke Terrace, Blackheath, July* 2, 1859.

A Fortnight at Hornsea, Yorkshire.—In the immediate vicinity of Hornsea, a small village on the coast of Holderness, Yorkshire, there is a large sheet of water called Hornsea Mere. This Mere is two miles long and three-quarters of a mile broad; one side is wooded to the water's edge; the rest is surrounded by pasture-land and meadows. Though this attractive spot is almost unknown to the entomologist, it has not produced so many rarities as perhaps might have been expected, which may be attributed in a very great measure to the weather, the month of July being one of those least prolific in insect life, especially Coleoptera. That part which is wooded is by far the most productive, the margin being lined with quantities of cut reeds, which when turned over can scarcely fail to present to the view something worth having. The coast, with its cliffs and sand-hills, has also received some attention. The latter, overgrown with Arenariæ, Zostera marina, and Ononis vulgaris, harbour several local insects, which are to be obtained by uprooting the plants. The soil of the whole district is exceedingly sandy. I will proceed to enumerate those beetles which were taken at the Mere, including a few species and specimens which fell to my lot when over for a day in the middle of June. The following are the Geodephaga, exclusive of common species:—

Elaphrus riparius.
Oodes helopioides (10).
Chlænius nigricornis. C. holosericeus is said to have been taken here, but probably in the spring months.
Synuchus rivalis (2).
Anchomenus viduus (4).
„ piceus. Abundant.
Anchomenus pelidnus (60).
Pterostichus anthracinus.
„ gracilis (2).
„ minor (10).
„ erythropus.
„ strenuus.
Bembidium obliquum (1). Rare.
„ assimile.

As the geographical distribution of the Brachelytra is yet but little known, nearly all the species taken are mentioned:—

Homolota graminicola, *Grav.*
„ elongatula, *Grav.*
Deinopsis fuscatus, *Matthews* (2). Rare.
Tachyporus chrysomelinus, *Linn.*
„ pusillus, *Grav.*
Conosoma littoreum, *Linn.*
Tachinus marginellus, *Fab.*
Mycetoporus longulus, *Mann.*
Xantholinus punctulatus, *Payk.*
Philonthus umbratilis, *Grav.* (6). Local.
„ corvinus, *Erich.* (2). Rare.
Philonthus micans, *Grav.* (10). Local.
„ aterrimus, *Grav.*
„ cinerascens, *Grav.* (4). Local.
Quedius impressus, *Payk.*
„ fuliginosus, *Grav.*
„ maurorufus, *Grav.* (3). Rare.
„ ruficollis, *Steph.*
Lathrobium elongatum, *Linn.*
„ fulvipenne, *Grav.*
„ brunnipes, *Fab.*
„ quadratum, *Payk.*

BRITISH MUSEUM

Stenus bimaculatus, *Gyll.*
„ Juno, *Fab.*
„ buphthalmus, *Grav.*
„ vafellus, *Er.* (1). Rare.
Stenus plantaris, *Er.* (6). Uncommon.
„ latifrons, *Er.* (2). Rare.
Oxytelus rugosus, *Fab.*

All worth mentioning belonging to the other divisions is Donacia impressa. The sand-hills and cliffs have yielded in Geodephaga:—

Nebria livida.
Calathus flavipes.
„ mollis. Abundant.
Synuchus vivalis (10).

Anchomenus elongatus, *Dej.*? The insect which is supposed to be this species was taken at the base of the cliffs, under some dead thistles. It was sent off by post the following day; but before it reached its destination the box came open, and the insect disappeared. It is a great misfortune that this new British species should have thus been lost. I have not yet seen a genuine A. elongatus, *Dej.*; when I have I may write more confidently. The following description is what I remember:—Greenish brass. Narrower than A. viduus or A. lævis. Antennæ black, basal joint red. Elytra having on each a series of six distinct punctures, four in close succession on the third interstice, and two either on the second stria or second interstice. Legs black; tibiæ and tarsi testaceous. Length 3½ or 4 lines. A single individual of A. elongatus is said to have been taken, twenty-eight years ago, near Lowestoft (vide 'Annual,' 1857).

Broscus cephalotes. Several.
Amara acuminata.
„ fulva (40).
„ convexiuscula (12).
„ Trechus discus (2).
Bembidium æneum.

„ littorale. Four or five of a singular variety which has been taken in several parts of the Yorkshire coast, by the Rev. William Hey and myself. It differs from typical B. littorale in being smaller, narrower, and having the spots much more widely spread and conspicuous.

„ tibiale. Several.

I found B. concinnum, B. affine and B. gilvipes at Withernsea, a little lower down the coast. The Brachelytra found on the sand-hills at Hornsea are not worth recording. I captured Anobium molle in a window of the Marine Hotel. The fortnight commenced July 7th.—*W. K. Bissill; August* 12, 1859.

Proceedings of Societies.

ENTOMOLOGICAL SOCIETY.

***August* 1, 1859.—J. O. WESTWOOD, Esq., F.L.S., in the chair.**

Donations.

The following donations were announced, and thanks ordered to be presented to the donors:—'Proceedings of the Royal Society,' Vol. x., No. 35; presented by the Society. 'Journal of the Proceedings of the Linnean Society,' Vol. iv., No. 13; by

the Society. 'Proceedings of the Zoological Society of London,' Nos. 370—391; by the Society. 'Catalogus Hemipterorum, Herausgegeben von dem Entomologischen Verein zu Stettin;' by the Society. 'Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien, Jahrgang 1858;' by the Society. 'Errinerung an Mitglieder der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften, von Dr. Carl Friedrich Philipp von Martius, Secretari der gennanten Classe;' 'Monumenta Secularia, II. Classe;' 'Almanack für das Jahr. 1859;' by the Königlich Bayerischen Akademie der Wissenschaften. 'Farm Insects,' No. 2; by the Author, J. Curtis, F.L.S., &c. 'The Zoologist' for July; by the Editor. 'The Literary Gazette' for July; by the Editor. 'The Journal of the Society of Arts' for July; by the Society.

The following works were announced to have been recently purchased for the Society's Library: — Mulsant, 'Coleoptères de France,' 8 Vols. Silberman, 'Revue Entomologique,' 5 Vols. Erichson, 'Naturgeschichte der Insecten Deutschlands,' Vol. i. Fas. 1—3; ii., 1—6; iii. and iv., 1 and 2. Ratzeburg, 'Die Forst Insecten,' 6 Vols. Germar, 'Zeitschrift für Entomologie,' 5 Vols. Koch, 'Arachniden,' 16 Vols.; and 'Uerbersicht des Arachniden Systems,' 5 Parts.

Mr. H. W. Bates, Corresponding Member of the Society, who had lately arrived in England, was present, and very cordially received by the Meeting. He has devoted the last thirteen years to the investigation of the Entomology of the Valley of the Amazons; and the collections which he has from time to time forwarded to this country sufficiently attest his energy and perseverance under the dangers and hardships to which he has been exposed.

Exhibitions.

Mr. M'Lachlan exhibited specimens of Cochylis Francillana, with the pupa-cases from which they were bred, projecting from a stem of the wild carrot, in which the larva feeds; they were found in February last, at Forest Hill. Also specimens of Rhodophæa rubrotibiella, taken recently at Forest Hill, in the same locality as the two specimens exhibited by him at the meeting of the Society in September last, and then new to Britain.

Mr. M'Lachlan also exhibited an example of Ochsenheimeira vacculella found at Lewisham, on the 28th ult., in a most singular situation for the imago of a Lepidopterous insect, namely, under close bark on the stump of an old alder tree, about three feet from the ground.

Mr. Bond exhibited the larva of Drilus flavescens, found near Folkestone.

Mr. Lewis exhibited a living example of Chlænius Schrankii, of which he had lately taken about sixty specimens near Luccombe, Isle of Wight.

Dr. Wallace exhibited a specimen of Deilephila lineata, taken by Dr. Burkill, in 1856, at Tremeri, in Ireland; and Agrotis valligera, from the same locality. He also exhibited examples of the following species, which he had lately found on a recent visit to Waterford, namely, Leucania littoralis, Mamestra abjecta, Cidaria populata, Larentia salicaria, Eupithecia denotaria, E. constrictaria, E. satyraria, Acidalia immutaria, and A. inornaria. Euchelia Jacobææ and Cetonia aurata were in great plenty in the neighbourhood; the latter species, he was informed, had been very rare till late years.

Mr. Mitford exhibited fine specimens of Trochilium Chrysidiformis, Timandra prataria, and Spilodes palealis, taken near Folkestone.

Mr. Westwood exhibited a mass of the empty cocoons of Ilythia sociella, forwarded to him by Professor Harvey, of Dublin, of which the Irish naturalists had failed in determining the nature, which had been taken from the stomach of a cow. The only explanation which he could give of so unusual a situation was, that, as the social caterpillars of these species frequent the nests of humble bees in considerable numbers, it was probable that the cow, whilst grazing, had come upon the nest of a moss-carder Bombus, and had chewed it together with the grass, the stomach not having had the power to dissolve the mass of cocoons. Mr. Bond confirmed this opinion, having found the mass of cocoons of the Ilythia in the nest of the moss-carder bee.

Mr. Westwood had observed, last season, some elm trees near Oxford, which were infested by the Scolytus destructor in the heat of the summer, exuded sap, and attracted large quantities of insects. One of these, this season, has died off, still emitting small patches of extravasated sap: this had attracted vast quantities of Cetonia aurata, the tree from the base of the trunk to the topmost branch being covered by hundreds of specimens, in clusters of a dozen or score together, producing shining masses visible at some distance, and which had attracted Mr. Westwood's attention to the insects. Many had become so stupified from the fluid they had imbibed that they had fallen down helplessly to the ground. Their sense of smell must have been extremely acute, and the odour of the sap (in very small quantities in each place) very penetrative and diffusive, in order to have attracted so great an assemblage of beetles.

Mr. Douglas remarked that an almost imperceptible exudation from the trunks of trees was often caused by the young larva of Cossus ligniperda.

Mr. Tegetmeier described a practical application of Shirach's discovery respecting the power of bees to raise a new queen from a neuter or worker grub; by means of which the contents of old hives can be taken without destroying the bees or sacrificing any brood. The plan consists in driving out the queen, and about half the bees, in the spring, and establishing them as a new swarm, when the bees remaining in the old hive have to rear a new queen from a worker grub. From the time required to accomplish this, it follows that no eggs can be laid for about three weeks; by this time the workers producing eggs laid by the old queen will have been hatched out, and the cells filled with honey, when the whole of the bees are to be driven out, and the honey, which will be found perfectly free from brood, retained for use. The plan had been very successfully worked at the bee-house of the Apiarian Society, and specimens of the results were submitted to the Meeting.—*E. S.*

Addendum to the Paper on Bovine Animals: the Cattle of Egypt and Nubia.—"In the upper countries the cattle are of a peculiar and probably distinct species of ox, very much like our own, but with a hump on the back; and the females are, as milch cows, good for nothing, being always nearly dry; so that we could scarcely ever procure cow's milk, even when meeting with large herds of them, much as we should have preferred it to that of goats. Our common breed or species is also seen in Nubia, &c., but more rarely. In most parts of Egypt, but especially in the lower provinces, the common and hump-backed cattle are in a great degree supplanted by the buffalo, to which we were indebted for some of the milk obtained in Egypt, and all the abominable mass of indigestible fibres sold for beef. The buffalo has not made its way very far beyond the second cataract, or into Nubia. It is an excellent swimmer; thousands may be seen on the banks and shallows of the Nile during the heat of the day, luxuriously reposing, with only their heads, or even the tips of their hippopotamus-like noses, visible above water; the stream that is continually passing over them bringing renewed coolness with it. At times one envies them their position." (The late Dr. W. Arnold Bromfield, in the 'Zoologist.') As contrasted with the buffalo, of course the humped cattle are "very much like our own;" but the hump is only one of many distinctions, as already noticed in detail. We learn, however, something of the present range of the domestic Indian buffalo in the valley of the Nile. The ox of Cochin China, as noticed in Crawfurd's 'Embassy to Siam and Cochin China,' p. 479, "is a small animal, uniformly of a reddish brown colour, and destitute of the hump so remarkable in the Indian cattle." It is not identified by this author with the humpless cattle of Siam, which he also notices. From Johnson's 'Indian Field Sports' (p. 24) it would appear that the gaour (*Bos gaurus*) inhabited the hill districts bordering on the Damooda so late as about half a century ago; nor would it appear to have been then of rare occurrence. Describing a "hunquah," or grand hunting party, when the game had been driven from all quarters to a particular jungle, he remarks, "If any credit could be given to the assertions of the people, there were very few of them who had not seen tigers, leopards, gours (a species of wild bullock), and all sorts of wild animals in the course of the day." The banteng (*B. sondaicus*), we have lately been assured by our late and much-lamented friend Major Bedmore, is found in the southernmost part of the Tenasserim provinces in large herds; the animal so much resembling the humpless domestic cattle that our informant, at the time of his personally observing them, was not aware that it constituted a peculiar wild species. We have also learned that "feral" humped cattle are numerous in parts of the province of Mysore, where their beef is held in the highest estimation, and very justly so, according to the judgment of our informant, who speaks from practical experience.—*Editor of the 'Indian Field.'*

Birds of Canada observed near Kingston during the Spring of 1858.

By Captain HENRY HADFIELD.

Cedar Bird (*Ampelis americana*). March 3rd. Saw two of these beautiful birds feeding on the berries of the mountain ash. It was a frosty day, with about six inches of snow on the ground; but the latter end of February had been mild, and the sun so powerful that most of the snow had disappeared, which may account for their early arrival. I subsequently observed a flock of about fifty in a large willow by the road-side, and close to some houses. They did not seem to be in the least disturbed by the foot passengers; but on the approach of a cart or carriage they would all rise together with amazing rapidity, and, wheeling round the buildings, disappear in an instant. The return to their favourite ash, for there was but one covered with berries, was as sudden as their departure; at one moment the tree might be empty, the next it was seen crowded with these elegant birds, their glossy silk-like plumage glistening in the sun. Their every attitude is graceful; and as I stood within ten yards, gazing at them, I thought them the most gentle creatures I had ever beheld. Nevertheless, I am bound to say that they are voracious feeders, having found the throats of the specimens examined literally crammed with berries. "Lesser Waxwing" would perhaps have been the more appropriate name.

Song Sparrow (*Fringilla melodia*). March 3rd. Procured two. On the 22nd of April observed one carrying building materials.

American Shrike (*Lanius excubitor*). March 8th. Having walked through the snow to a very secluded spot about a mile from the town, my attention was attracted by the plaintive and subdued notes of a bird apparently concealed among the foliage of the fir trees over head; but, after vainly endeavouring to discover it, on emerging from the wood I perceived it on one of the topmost branches of a lofty tree, fully a hundred yards distant. Having to pass over an open space, I was seen, and the shrike disappeared; but I had observed that on a small bird flying by he darted after it, but did not pursue it to any great distance, speedily resuming its post of inspection. Although I revisited the spot on the following day, I did not succeed in finding it, but subsequently saw one or two which proved too shy and wary to be approached. I had observed one, rather late in the autumn, taking a southerly course; its flight was direct, but undulated.

American Siskin (*Fringilla psaltria*). March 8th. Observed a few feeding among the topmost branches of the pines; they were restless, and, like the tits, in constant motion. Secured two specimens.

Snowy Owl (*Strix nyctea*). March 18th. On passing through some enclosed fields skirting the "bush," I was surprised and somewhat startled at seeing one of these noble-looking birds suddenly rise from off the snake-fence, within a few yards of me, where it had sat secure and unobserved, its plumage assimilating with the bleached and weather-beaten palings: it was over the fence in an instant, before I could get my gun to my shoulder. Knowing the sluggish soporous nature of owls, and forgetting that this was the day-owl, I momentarily expected to see it alight; but on it went with buoyant flight, never stopping till it had gained the shelter of a distant clump of trees, among which it disappeared. Although in rapid pursuit, I had not cleared half the distance when I discovered that I was not the only enemy it had to contend with: some crows sallying from the neighbouring wood attacked the poor owl, which was soon driven from its position, and, being sorely harassed in its retreat, endeavoured to avoid its persecutors, who had the advantage in speed, by gradually rising until it had attained a considerable elevation. This order of flight being unsuited to the pursuers, they gradually relaxed their efforts; and there now remained but one crow in pursuit, which, having momentarily succeeded in gaining the ascendant, made a pounce at the owl, but whether a real attack or a feint the distance prevented my seeing; but, soon relinquishing the chase, it rejoined its companions, and the persecuted bird was allowed to pursue its course, and was soon lost sight of in the distance. The scene was an exciting one, and I greatly coveted the prize, which I should probably have secured had it not been for the untimely appearance of the crows.

Migratory Pigeon (*Columba migratoria*). March 20th. At about 5 P.M. saw a flock of about forty or fifty, flying rather low in a north-easterly direction. Though these are the first I have seen, I am informed that on the morning of the 19th some were observed. On the 21st, between 6 and 7 A.M. (there being a heavy gale from the south-west) a vast number of pigeons passed over the suburbs of the town, their flight low, in consequence of the violence of the wind. Several small flocks were seen during the day, following the same course. I understand that they have made their appearance some weeks earlier than usual, which may be accounted for by the extreme mildness of the season. On the 20th of May, on the passage from Kingston to Toronto, when standing on the deck of the steamer, a little before sunrise, a pigeon, coming from the American side of the lake, passed close over my head, between the fore-mast and the funnel. The rapidity of their flight is almost beyond belief: they no sooner appear than they are gone; and should the unwary gunner be standing at ease, very possibly the pigeons may be a quarter of a mile off before he has his gun to his shoulder. Having shot one in the head, it towered to a considerable height, and then fell dead. Though the length of the adult male is 17¼ inches, the body, exclusive of the neck, measures but 4½ inches.

Rusty Grackle (*Gracula ferruginea*). March 20th. In passing through a wood my attention was attracted by notes somewhat resembling those of the guinea-fowl. Following the direction of the sound, I descried, among the branches of a large tree, a flock of grackles. They were in perpetual motion, all singing together, if their monotonous notes might be styled a song; but in the solitary wood it had a pleasing effect. They frequent the marshes, and, like the redwinged starling, roost, I believe, among the reeds, having observed them assembling in great numbers of an evening in such localities.

Bluebird (*Sylvia sialis*). March 20th. Observed one of these beautiful but common birds, so like the redbreast in figure.

Snowbird (*Fringilla nivalis*). March 29th. Observed one of these common little birds, its black and white plumage making it remarkable.

Robin (*Turdus migratorius*). March 29th. Observed the first robin. On the 21st of April saw one picking up shavings in a garden. This is the first bird that I have noticed preparing its nest; for although the season has been an unusually mild one, the weather has been rather cold for some days. On the 23rd found the robin's nest in the forked branch of a leafless willow, at about eight or nine feet from the ground. It is composed externally of coarse grass, intermixed with a few shavings, and has in its unfinished state a rough lining of clay. The shavings being placed near the bottom, the nest must have been almost wholly constructed between the morning of the 21st and noon of the 23rd.

Black Hawk (*Falco niger*). March 30th. Saw what I believe to have been one of these handsome birds, perched on the top of a lofty tree on the border of a marsh, but failed in my endeavours to get a shot at it.

Pewee Flycatcher (*Muscicapa nunciolo*). March 10th. Saw two or three on the banks of a stream, in a very sheltered situation; secured one specimen. On the 17th of April observed several at the entrance of the Rideau Canal. They were taking flies from off the surface of the water; and I also noticed that they occasionally dropped on it for a second or two with expanded wings. After capturing a fly, they would turn to a branch overhanging the water.

Canada Goose (*Anas canadensis*). March 31st. When about a mile from the town, saw nine geese, flying very low in a north-easterly direction. I subsequently heard that they had been seen on the lake, but none were killed.

Goldfinch or Yellowbird (*Fringilla tristis*). April 1st. Observed the first. April 6th. Procured two specimens, both males, one in perfect adult plumage.

Black and White Creeper (*Certhia maculata*). April 1st. Shot one of these rather rare birds; on the 18th of May procured another.

Length 5 inches 3-tenths; extent of wings 7½ inches; from flexure, 2 inches 7-tenths.

Yellowbellied Woodpecker (*Picus varius*). April 5th. Shot a handsome male. Believe it to be rather an uncommon species in this part of the country.

Barn Swallow (*Hirundo americana*). April 6th. Saw several; shot three. This species, unlike the purple martin, avoids towns and villages, and frequents isolated barns and out-buildings. Its tail is forked; and this bird, in shape, colour, and manner of flight, bears so strong a resemblance to the chimney swallow of Europe that even an ornithologist might be excused for mistaking it on the wing.

American Crossbill (*Loxia curvirostra*). April 6th. Procured a specimen. They are, I believe, permanent residents, though I did not fall in with them during the winter; but unless specially sought for they might not be noticed, as they feed on the upper branches of the pines, among the dense foliage that crowns the perpendicular trunks.

American Snipe (*Scolopax gallinago*). April 7th. Shot a bird of this species, weighing five ounces. Although darker, and I think somewhat larger, it closely resembles the common European snipe.

Redwinged Starling (*Icterus predatorius*). April 7th. Procured a specimen. Had observed one on the 3rd. Although a common bird it is one of the most beautiful in the country, the glossy red and black plumage of the male making it very conspicuous. It is to be seen perched on the reeds and bull-rushes. Its constantly-reiterated song is plaintive, but monotonous. They are restless, and perpetually flitting about, making short excursions into the bush bordering the marsh, where they are easily approached.

Purple Finch (*Fringilla purpurea*). April 7th. Shot a handsome male. This is a common species, occasionally frequenting the gardens in the town.

Blackcapped Titmouse (*Parus atricapilla*). April 7th. Observed a few of these common birds, which are, I believe, winter residents.

Goldwinged Woodpecker (*Picus auratus*). April 9th. Found two of these splendid birds, male and female; secured them both, but the latter, being merely winged, ran up a tree, and was caught with difficulty. It was put into a room with a few logs of wood, up which it was constantly climbing, but when disturbed would conceal itself between them. It fed well, and I was in hopes of preserving it, but after a few days' confinement it pined away and died, when I found it had been wounded in the body as well as in the wing.

Wood Duck (*Anas sponsa*). April 10th. Obtained a handsome male specimen of this by no means common species, but which is said to breed in the woods, constructing its nest in hollow stumps and trees.

Scaup Duck (*Anas marila*). April 10th. Procured a specimen.

Meadow Lark (*Alauda magna*). First week in April found three of these gigantic larks, which appear to be common hereabouts.

American Wigeon (*Anas americana*). April 14th. Examined a fine specimen recently killed.

Green or Whitebellied Swallow (*Hirundo viridis*). April 14th. At 6 P.M. observed a number of these birds in a sheltered situation in the marshes. Had previously seen one on the 1st, about the same hour; and I believe they resort there to roost among the reeds. On the 5th of May I noticed that a pair had been for some days constructing their nest under the eaves of my house, on a projecting quoin; and I observed them picking up straws from the street, to mix with the clay.

Shore Lark (*Alauda alpestris*). April 16th. Saw a small flock, out of which I shot one; though by no means common. I subsequently fell in with a few; and a male being slightly wounded in the wing, it was placed in a cage, where it thrived, but continued shy. It had a plaintive but not prolonged note. They occasionally alight on the fences, but never on the trees.

Rubycrowned Wren (*Regulus calendula*). April 17th. Shot a handsome male.

Goldencrested Wren (*Regulus cristatus*). April 17th. Procured a specimen.

Belted Kingfisher (*Alcedo alcyon*). April 26th. Found a few of these birds in a marsh about two miles from the town. One I saw balancing itself over the water, being kept well nigh stationary by its quivering wings before making the plunge. On emerging from the water I observed it occasionally resort to a stranded log, but taking care to keep out of gun-shot. Others I saw alight on the branches of trees overhanging the swamp, but were far too wary to be approached, so I failed in my endeavours to procure specimens.

Crow (*Corvus corone*). April 26th. Found a crow's nest at the top of a rather lofty fir tree. On shouting out the bird never stirred, but on striking the trunk with a stick it flew out. My companion having ascended the tree with some difficulty, the nest was found to contain five eggs, but one was broken in the descent (Wilson says the crow has four). As they vary somewhat in size, I give the exact dimensions, which are as follows:—First, 1 inch 7-tenths in length, by 1 inch 1-tenth in diameter; second, 1 inch 6-tenths, by 1 inch 2-tenths; third, 1 inch 5-tenths, by 1 inch 1-tenth in diameter; fourth, 1 inch 5-tenths, by 1 inch 1-tenth. On the 13th of May found another crow's nest in a moderate-sized fir, at about forty feet from the ground. It was very imperfectly concealed, and contained four half-fledged birds, apparently about ten days old.

Field Sparrow (*Fringilla pusilla*). April 26th. Found a small nest in a stunted bush near the ground; it contained four eggs. Saw the bird leaving the nest, and believe it belonged to this species.

Great Northern Diver (*Colymbus glacialis*). April 28th. Procured a splendid old male, by far the largest that I saw during my stay in Canada; it measured 36 inches in length, by 60½ inches in extent of wings; wing, from flexure, 15¼ inches; bill, along the ridge, 3 inches 4-tenths; lower mandible, from plumes, 3 inches; bill, from gape, 4 inches 9-tenths; upper mandible exceeds the lower by 1-tenth of an inch; mouth, 1 inch 4-tenths wide; diameter of eye, 4½-tenths; tarsus 3 inches 7-tenths; middle toe, 4 inches 4-tenths, claw 6½-tenths; inner toe, 3 inches 8-tenths, claw 5½-tenths; outer toe, 5 inches, claw 4½-tenths; back toe, 8-tenths of an inch, claw 3-tenths; tarsus, 3-tenths of an inch wide, 1 inch 1-tenth deep; tail, 3 inches long; black band or collar, 1¾ inches wide; depth of bill, 1 inch 2-tenths; nostril, ½ an inch in length; circumference of head, 10 inches; round the body, beneath the wings 18½ inches, over the wings 21½ inches; circumference of the neck, 7½ inches; length of thigh, 8½ inches; humerus or arm, 8¼ inches; weight, 11½ lbs. Wilson remarks (vol. iii. p. 259), "the best and largest has been described for this work; weight, 8½ lbs.; length, 34 inches; extent of wings, 54 inches," proving my specimen to be a gigantic one. Macgillivray, in describing the northern diver, says the male is 31 inches in length, and 49 inches in extent of wings. Both Wilson and Montagu seem to agree in thinking that the size of the European specimens has been exaggerated. I have no doubt, notwithstanding all that may have been advanced to the contrary, of their being one and the same species. On the 19th of May I observed three of these divers on the Lake (Ontario).

Purple Martin (*Hirundo purpurea*). April 30th. Saw two of these beautiful birds. Though not a rare species, they are by no means common in the neighbourhood of Kingston; so that I failed in obtaining specimens in the autumn; but I occasionally observed them in the town, frequenting the houses near the Lake, but never fell in with any in the country; so almost despaired of getting specimens. But this spring

I determined to secure some, if possible; consequently, sallied forth at day-break into the streets, before the inhabitants were stirring, and got a fair shot at one flying round the corner of a house near the cathedral, but missed it, owing, I fancy, to over-excitement; but as it would have been imprudent to have ventured another shot I had to return home disappointed; and it was not until the 19th of May that I succeeded in getting one. On walking through the streets on my way to the steamer to embark for Niagara, perceiving one on the roof of a house, I could not resist the temptation of shooting it. It fell dead, almost on the heads of some children at play. This, together with the report of the gun, proving too much for their nerves, they set up a yell that might have alarmed the whole neighbourhood; so I was glad to walk off with my prize, which proved to be a handsome cock bird; and I secured a female on the following day, near Hamilton. By the 5th of May they had, I think, commenced building, as I noticed them coming from under the eaves of the houses.

Carolina Nuthatch (*Sitta carolinensis*). May 8th. Shot one of this very common species, which is permanently resident. Length, 6 inches; extent of wings, 11¼ inches; wing, from flexure, 3¾ inches.

Savannah Sparrow (*Fringilla Savanna*). May 8th. Shot one of these rare and beautiful sparrows, which, according to Wilson, are rarely found inland, or far from the sea-shore. Length, 6¾ inches; extent of wings, 8¼ inches.

Chimney Swallow (*Hirundo pelasgia*). May 9th. Observed the first. On the 14th shot three; average length, 5 inches 2-tenths; extent of wings about 12¼ inches. In appearance, manner and rapidity of flight, this bird greatly resembles the common European swift, although not much more than half the size. The peculiar, bare, sharp-pointed shafts of the tail-feathers, like those of the woodpecker, doubtless support and assist them in climbing. Wilson says, "It is never seen to alight but in hollow trees or in chimneys;" is the "latest out in evening of all our swallows." Like the European swift, it is the last to arrive, but the first to depart. In describing the nest, the same author states that the materials of which it is composed are "fastened together with a strong adhesive glue or gum, which is secreted by two glands, and mixes with the saliva." Macgillivray informs us that the "materials of the nest of the swift are confusedly felted and agglutinated," and that the gelatinous matter is probably derived from the salivary glands. He also remarks that the claws are "very strong and acute." And Wilson tells us that the feet of the chimney swallow are extremely muscular, and the claws very sharp. This being little more than a list of species observed, I cannot carry out the comparison; but I am convinced that the chimney swallow of America is closely allied to the swift. I failed in procuring specimens in the autumn, though I saw vast numbers, but almost invariably at a great height. Long after the rest of the swallows had retired they might be seen congregating about the tower of the cathedral, their common roosting-place.

Redbellied Blackcapped Nuthatch (*Silla varia*). April 16th. Observed a few of these small nuthatches in a fir wood; secured two. Length, 4 inches 3-tenths; extent of wings, 7¾ inches; wing, from flexure, 2 inches 6-tenths. This species is said to be migratory.

H. W. Hadfield.

(To be continued.)

Notes on the Mountain Birds of Jamaica.

By W. Osburn, Esq.*

"Freeman's Hall, Trelawny, Jamaica,
"July 7, 1859.

"My dear Sir,—I resume my notice of the mountain birds of this portion of Jamaica, by continuing my remarks on Columba Caribbea. I may first observe that the cherry tree on which they were feeding I have since had good cause for supposing to be the clammy cherry (*Cordia collococca*), though I have no botanical work at hand to verify the surmise. From the two birds brought to me for sale in the winter I had put down the colour of the iris as bright yellow, but I saw on the present occasion that it was composed of two very distinct circles, the inner hazel, the outer blood-scarlet. I was wondering at the difference in a male bird I had winged, but which seemed otherwise uninjured, when, on laying him on his back and applying severe pressure to the ribs, so as to produce suffocation, I was surprised to observe the colour of the outer circle of the irides change rapidly during the agonies of death from blood-scarlet to bright yellow. After death they slowly resumed their first colour. In this young bird, which was dead when it fell, the irides were bright yellow, and exhibited no change. As all three adult specimens I procured were alike in this scarlet ring, I would suggest that the natural colour of the iris is yellow, but can be coloured by the corpuscules of the blood, which, by some muscular effort, voluntary or involuntary, of the bird, can be withdrawn, when the blood circulates as usual colourless. The next evening I returned to the pasture for the purpose of watching them only. It was about sunset, and there were at first no birds visible; but, after watching a little, one here and there appeared at a considerable height from the tall forest that covered the steep hills around. The ring-tail, even at a great distance, is easily distinguished from our other Columbadæ by the slow strokes of its wings, its heavy flight and the disproportionate length of the tail; they have, too, a habit of setting off in a wide circle, pausing as if they had not made up their minds where to go, and then returning to the perch they had left. My firing at them the preceding evening had probably alarmed them, and these might be reconnoitring excursions. At length a pair perched on the topmost twigs of the clammy cherry, so that I had them *en silhouette* against the glow of the evening sky. After eyeing me suspiciously a little (for there was no shelter near for concealment) they descended to the lower branches, and I then remarked that the ring of the expanded tail is much more obvious than I should have supposed from the dead bird. They reminded me oddly of our green parrots, in the heavy business-like way they almost tumbled in among the twigs, and at once began to pluck and rapidly swallow the large berries, quite regardless that the twigs behind raised the tail straight up, or the leaves prevented a wing from closing; but they soon took other positions, and the object of the large tail, the strong feathers of which it is composed, and the vigorous muscles which move it, seemed very apparent in its constant requisition as a balancer,—continually in violent action as the heavy bird stretched and tugged at the ripest berries, the twigs swaying and shaking with its weight and exertions. It is remarkable that in our large Cuculidæ, birds which also obtain their food by leaps, in positions when often the wings cannot be expanded, the same contrivance is resorted to. They jumped from twig to twig, as the berries were finished, with a good deal of commotion. A sidling movement along a branch was a very common manœuvre for changing the bunches above, not foot over foot, like a parrot, but moving one foot sideways and then the other up to it, and very quickly. I approached nearer, and just as I stopped I observed the female bird, on a thicker twig, try to reach a tempting bunch below; she stretched but could not reach it, sidled a little further out, but it was still beyond her; she then turned completely over, so that she clung to the twig ***back downwards.*** A half turn of the neck brought the head in the natural position, and she thus easily picked out four or five: she then recovered herself, making a great commotion by flapping against the leaves with her powerful wings. The male bird had finished, and took the sitting posture on a thicker twig, but the female seemed as voracious as ever. I now approached slowly still nearer. The male observed me attentively, stretching his neck, not rising from his crouch, but uttered a moan very like a person in pain, constantly reiterated. I believe this to be analogous to the much shorter, quicker snort the tame pigeon and others will give when partially frightened. My distance from them was not now more than ten yards. As they flew past me their wings produced a slight winnowing sound, but nothing like most other pigeons. They perched on the top of a cedar close by, doubtless to watch my movements.

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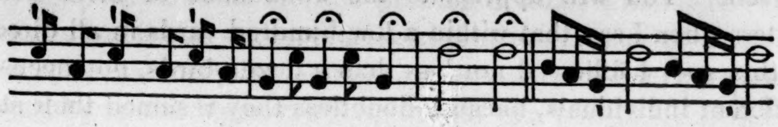
* Communicated by P. H. Gosse, Esq., F.R.S.

"These observations were made under the very adverse circumstance of a cloud of mosquitoes; I was obliged to request a friend with me and my servant to withdraw a little, as I was afraid their defensive movements would keep the birds at any rate in a state of partial alarm. My hands I could shelter, but on the face and ears it was, during the hour I watched them, like suffering an attack of measles; but I never could detect in the birds the slightest recognition of their presence: and, so far as I can gather from the structure of the bird itself, the unusually thick, compact plumage, the horny defences of the legs (plumed) and bill seem to leave not a vulnerable point, except the orbits. However, it seems universally affirmed that they are attracted by smoke, and will perch over a fire, partly spreading their wings, as if intently enjoying it; and such statements should not be lightly set aside, but that the cause of this is [the desire to evade the assaults of] mosquitoes does not appear quite so clear. Accounts, too, seem to agree that when in their autumn quarters, the high mountain woods, they repose in rows on the thicker branches during the heat of the day. Their voracity also is famous, but this, I would suggest, is fully explained by the small portion of the swallowed food which is appropriated to their sustenance. I only saw eight or ten birds altogether, but I was assured that before the tree was in a great measure stripped of its fruit they might be reckoned by dozens in this very pasture, and I can even imagine their numbers amounting to hundreds were their food abundant in one particular spot of a district. But it was a fine sight to see these noble birds feeding; their fearlessness was so unusual. All the colours of their plumage,—the soft lake of the head and neck,—the gay blue of the wings and back,—as well as their actions,—all plainly visible, in beautiful contrast with the dark green foliage and the splendid racemes of scarlet fruit among which they were moving; and every action seemed to show how completely they were adapted to their appointed mode of existence.

"On examining, a few days afterwards, one of our green parrots I had just shot (Psittacus agilis), I was much struck with the similarity the proportions of the tibia and tarsus bear in both birds; and this is the more worthy of remark as in both the habits and mode of taking food may be said to be identical. Both are heavy birds, seeking their food at the ends of small twigs and in positions where great grasp is required, and where constant efforts must be necessary to preserve balance; and both are birds with capacious crops, passing many hours in repose amid the security of the forests. In the above observations I have alluded to what I conclude to be the use, in part at any rate, of the powerful tail with which this pigeon is furnished. With the parrot it is the reverse; the tail is extremely short; but I would suggest that the form of foot in the parrot would lead us to suppose that as a climbing instrument its grip is far greater. The tail therefore may be a necessary compensation to the pigeon for a differing structure.

"I alluded in my last to a beautiful but unknown song now constantly to be heard in the forests here. I devoted a morning of the past week to its investigation, but I found the task so much more difficult than I anticipated that I had to repeat my observations for several successive days before I could satisfy myself as to the songster. I may mention here, as bearing on the subject, that when, during the winter, I used to hear the long-drawn notes of the solitaire from the tall forests between here and Mahogany Hall, the negroes always assured me it was 'Hopping Dick Shiny-eye.' As I had your notes I knew this to be a mistake, and after my arrival here I had soon an opportunity of verifying your statements by procuring specimens of Ptilogonys armillatus, and seeing them in the forests, though I never had an opportunity of observing them actually emit the note. In the spring, when I returned, I heard these notes no more, but I still hesitated to conclude they were gone, for, from some far-distant depth of the forest, I used to hear a note that seemed the well-known one of the winter. If I stopped to listen it was audible, as the breeze passed, once or twice more, and then was silent. I soon found that these beautiful notes, like those of the solitaire, in quality of tone, were introduced in a song, and as the spring advanced I became very familiar with them. The song, if I was near enough to hear it commence, always began with a 'Quank, quank, quank, chu' (a very suspicious circumstance), and then



The first bar is rapid, and often repeated, a merle-like stave; the second I intend to represent the flute-like notes which remind me of the solitaire; but flute-like is, I feel, an expression very unsuggestive of the reality. It occurred to me, as I listened to it yesterday, that perhaps the vibrating tones which can be produced on a glass with water in it is something like it, but it is quite indescribable: there is a fulness, a mellowness, a deep tone and feeling,—a consciousness of life, about this voice of the forest,—that no mere instrument can imitate. You will see, by the little score I have given, they are exceedingly fond of the interval a fifth. The accented crotchets in the second bar are followed by still longer notes of the same quality. Sometimes there is a pause before the fifth is taken, with, to me, an extraordinary effect. At others the interval of a fifth or sixth is taken (as well as I can judge), after a run of two or three rapid notes. No sweet sound of the forest I know of is more beautiful than this. The deep gloomy recesses in which it is heard, the influence on sound of the shrouded gorges and rocks, the swell of the breeze which plays far over head, unfelt below, combine to make this 'sweetness long drawn out' one of the most deeply impressive of the voices of nature. Often, as I have returned home from following it, the jocund lay of the nightingale [mocking-bird], from a guava close to the house (for, notwithstanding Dr. Robinson's assertion, this lonely mountain residence has its full complement, three or four pairs at least), with its odd interludes of imitation, has seemed a downright shallow warble compared with its rival of the woods. But perhaps we should not attempt such comparisons; each is perfect in its way. I cannot help suspecting, however, that some of the notes supplied you for the solitaire may apply to this bird; for they once or twice attributed this song to a thrush. I have before remarked that hereabouts at the forest-edge, or deep within, the song is constant; it may be heard on the road which communicates between us and the lowlands, from some dark valley close by, or a towering precipice crowned with wood. The place I chose for my search was a bit of forest where they abound, some way within its boundaries, but where the track crosses the summit of a hill, so as to have the ground as level as possible. I have no negro on whose intelligence I could rely, so was obliged to undertake it myself. You will appreciate the abundance of these beautiful songsters when I say that within a few hundred yards in all directions from this spot I followed not less than a dozen birds, not necessarily all different individuals, because doubtless they resumed their strains. The forest just here is extremely thick with underwood, composed of small trees about the thickness of walking-sticks, bound strongly together with climbing ferns, Passifloræ, &c. The sink-holes, large and small, often shrouded by fallen leaves, make some caution necessary, and besides this the swarms of mosquitoes and perpetual clamour of Vireosylva olivacea, which abound here, were very distressing. Generally, when I had cautiously crept up and was trying, without moving, to catch sight of the songster, the song would be suddenly broken off, and followed by a 'quank, quank,' soon repeated more rapidly and becoming more distant. The wary bird had caught sight of me first. At other times I managed to get nearer, and then the song ceased; a bird darted out stealthily and lowly, whose dark back and rufous head could belong to no other than Merula Jamaicensis. Several times, however, I was more successful; I got close up without disturbing him, but not without his seeing me. The song would again cease, and I should at last espy him perched generally on the lower limb of a large tree, near the trunk, but sometimes on a low shrub a foot or two from the ground, where his colouring, in the sombre light, made him particularly difficult to see. He would 'Quank, quank,' flirting his wings and tail at each reiteration, then, as I kept quiet, relapse into a puffed musing attitude, and, after keeping me waiting for a quarter of an hour, drop and slide off among the bushes a foot or two above the ground, to begin his song a hundred yards further on. But on a few occasions I have, in birds disturbed by the man with me at some distance, and which have taken refuge close by without seeing me, seen the bird's bill and throat move as it commenced 'Quank, quank,' till it seemed brimful of the lovely notes that were coming, and burst into the first stave of the score given above; but they found me out before the second or flute-like notes were produced, and which do not seem to occur till the bird has sung a stave or two. I have thus given at length the grounds upon which I attribute this beautiful song to this wary thrush, and would place it amongst the most lovely of the warblers of the tropics. I am quite glad to see I am borne out by an assertion of your usually most accurate old Doctor ('Birds of Jamaica,' p. 259).

"The Black Banana Bird is common in the deeper glens of the forest. I shot one, the other day, swinging on a long strip of bark, where, head downwards, he was probing a small Tillandsia. I see I had not, when I last wrote, remarked that the tongue of this species is *pencilled;* it is horny and semitransparent at the tip, where it is hollowed by raised edges, the tip split into two portions, each of which terminates in two or three fimbriæ. The raised edges are jimped (to the lens), so as to leave little barbs pointing forwards; protrudible easily about a quarter of an inch beyond tips of mandibles; hyoid bones are slender, and not much longer than ordinary. You will observe that all these parts are small; indeed they escaped my observation. But it often reminded me of Certhiola and Tanagrella in its mode of inserting the beak into the sheathing bases of the leaves of the parasites it frequents. I found in the stomach fragments of insects, beetles, Orthoptera and a good many tough, leathery, empty cases, like those of grubs or eggs of insects, but no seeds of any kind. It has a swift dashing flight from tree to tree, the reflections of plumage often deceiving as to its colour. It is frequently difficult to shoot, from the rapidity with which it dodges about these epiphytes. I found a nest the other day, in the densest portion of the forest, attached to a wild pine (*Æchmea?*); when these plants have attained some age the terminal bud gradually leaves a long flattened stem of a foot or two firmly fixed to the tree. The dead leaves of the plant sometimes collect some of their in turn falling successors and leaves from surrounding trees; these gradually form a little bit of black mould, soon appropriated by Polypodiums and other pendant ferns. It was on a little but very graceful tuft of these the nest was placed; it was a simple cup, not very deep. It is now in my possession, and I should describe the whole to be composed of a thick interwoven mass of black fibres, which, without having the two at hand for comparison, appear to me precisely the same as those used by Icterus leucopteryx, only in this case the mass is much thicker and denser, and the outer threads are carried over so as to include bits of Lycopodiums, moss, &c., and the threads within keep down similar materials for a soft bed. But nothing could be more beautiful than the position of this artful structure on a bracket of drooping ferns, the stiff, arching leaves of the wild pine above sheltering it from the weather. The boys brought me young birds of this species, taken with bird-lime and evidently having just left the nest, a month ago. But in the male I shot the other day, the organs were still swollen, so that I conclude the breeding-season is not yet over, and I may light upon further information."

"Freeman's Hall, Jamaica,
August 6, 1859.

"Dear Sir,—In the outset of your preface to 'The Birds of Jamaica,' you allude especially to the very interesting group of the Hirundines, and as no less than three of our ascertained species were among your own discoveries, I conclude you will be glad of any further particulars respecting them which a residence among these mountains, the summer haunts of the major part, may enable me to give.

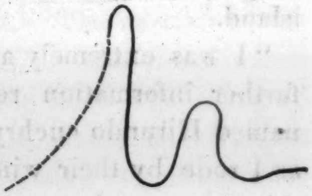
"In my first letter I alluded to that very remarkable swift, Acanthylis collaris (?) and gave such few observations as the previous spring and summer in the lowlands of Westmoreland and the latter months of the year in the mountains of Trelawny enabled me to furnish; but here my experience strictly accords with yours; their appearance is only very occasional, generally after rain or heavy gales of wind. On my arrival in these mountains, in January, I found them much more common, and during April and May, and since, during the summer, they may be said to be constant, scarcely a day passing when they are not to be seen in great numbers, and fully impressing me with the conviction that they inhabit some of the secluded precipices of the neighbourhood, though I have hitherto been quite unsuccessful in hearing of or discovering their hiding places. I have spoken with some hesitation about their *constant* appearance, because it would seem these birds use their extraordinary powers of flight to explore large districts in search of food, and do not, like swallows, regularly beat over a circumscribed hunting-ground; but, in greater or smaller numbers, rarely a day passes when their shrill scream does not here announce their presence. Soon after sunrise they may be seen in small numbers skimming backwards and forwards smoothly over a small space, at no great height, the tips of the long wings depressed much below the plane of the body, evidently busy feeding. As the morning advances a 'wee-wee,' very short, often not more than two syllables, as if interrupted, is heard, when the whole party of six or eight perhaps collect and dash furiously down the valleys, or round prominent objects near. They are gradually joined by more such parties, when the whole, consisting of from fifty to a hundred birds (in heavy weather more) collect and form a gyrating column, produced by the flock revolving at different heights in the same direction and round the same axis. This is not invariably the case; I have often noticed different parties come up and revolve in different directions round different axes; the effect was thus of course merely that of an eddying cloud. The screaming parties are then constant, from three or four to a dozen birds dash off with amazing velocity, the wings of now one and now another being elevated, motionless, above the body, but the tips kept backwards (a manœuvre, I think, very unusual with Hirundinidæ), and in this position shoot along with wonderful impetus, the whole so close together that a lucky shot might bring down half-a-dozen. I take great pleasure in watching them. No bird seems to spend more of its time in amusement, or betrays more exquisite pleasure in the exercise of the wonderful gifts bestowed upon it. Often, when in the forest after other objects, I hear the shrill 'wee-wee' far over the tops of the trees, the birds themselves of course invisible. Towards the middle of the day they generally disappear, and are again to be seen towards afternoon, when they practise the same manœuvres till towards sunset. If there be heavy rain, they come up with it, and, either before or after it, dash about low over the ground in the manner described by your correspondent. Then is the best opportunity the naturalist is likely to get for procuring specimens. To hit them when skimming low would be a difficult feat, and one I do not attempt; but they often rise about thirty feet, and come up slowly against the wind, evidently catching drifting insects. They are then within the capabilities of an ordinary marksman. With regard to the gyrating column, the question has often occurred to me whether this is to be considered as a mode of feeding or not; I think not, from the extreme steadiness of every bird; but that it is a mere concerted movement for collecting before making a change of hunting-ground for the whole flock, or perhaps simply a mode of enjoying their life and powers. I have often been amused by watching a Cathartes join them, and steadily keep his place in the crowd till it disperses. This arises, I imagine, not from any predilection of the swifts for such strange company, but from an odd inclination the John Crows have to join any gyrating bird, probably supposing that, as they only gyrate steadily when there is something near in their way of eating, other birds do the same. They often join the chicken hawk in the same way, merely, I think, to see what he has in his eye, for he sweeps along utterly indifferent to his train of black attendants. But in the case of the swifts this curious habit is in one respect fortunate, as, the rate of gyration of these Vulturidæ in ordinarily calm weather being well known, it enables me to say that that of Acanthylis is little, if anything, faster. If there be much wind the velocity is greatly increased, and they soon break up. Other birds are also deceived in the same way. I once noticed Hirundo euchrysea attack one that was gyrating lower than the rest, doubtless from the resemblance of its action to that of a raptorial bird. Towards the latter end of April, about 8 o'clock one bright morning, I observed an unusually large number of these birds revolving in column over a deep, thickly-wooded valley where our little Quartiers river disappears down a chasm. My position was on the road which winds round the summit of one of its enclosing hills, the valley immediately below. It was with great interest I observed a pair dart out from the summit of the column, and then one just behind or just above the others fall, screaming with peculiar vehemence, together into the valley below, recovering themselves just over the tops of the trees by a curve of astonishing rapidity. Several pairs did this in succession; but though I watched them attentively I always thought I could see a small space of two or three inches between the birds, except in one case, where the juncture seemed to me complete. I should add, that though I found their actions easy to observe when they left the column, as their course became more and more at right angles with the line of sight, and they plunged into the valley and shot over the tree tops, their flight was so rapid that I could not feel certain what they did. Sometimes several others would join; but close proximity always seemed to point out the pair whose nuptials the screams and activity of the pursuing birds were intended to celebrate. They then, at a slower pace, rejoined the column, and were lost amid the revolving crowd. But the contrast between the speed and erratic sweeps of the pairs, and the majestic revolutions of the column, was very striking.

"I shot a specimen the other day; but as you will probably have anticipated any observations on it I have to make (if you have received skins since your work was published), I will not add them, further than to remark that the stomach I found stuffed with the winged females of a small species of ant. There were a few larger insects,—Coleoptera, bees, &c.,—but not many.

"Of Tachornis phœnicobia I have nothing to add to the information you collected, except that, so far as my observations go, it is very much rarer on the north than on the south side of the island, where it is one of the commonest birds. Indeed, along the whole of the north coast from here westwards, the only place where I have observed it in any numbers, or constantly, is at a spot near Rose Hall, about mid-way between Falmouth and Montego Bay; and here, curiously enough, is the only clump of fan palms I have met with on this side, for it is certainly here an uncommon tree. In these mountains this little swift is still rarer: I have only observed it once, where it made the fourth species of Hirundine that were there skimming round this house, and the fifth I had noticed within half-an-hour.

"Cypselus niger, from its having escaped your observation, as well as that of your coadjutors, I long considered as probably a rare and very occasional visitor.

"On the 9th of June last we had much rain, heavy clouds which did not disperse, and much thunder; when, hearing the scream of Acanthylis, as well as the cry of Chordeiles, I went out to watch them, and see whether there was any probability of either giving me a shot. To my surprise Acanthylis seemed, as I thought, much smaller than usual, and the curved wings did not form the remarkable arch I was so familiar with. A great number of swifts were dashing about over the meadow, in the violent, impetuous way they do on rainy afternoons, when, one passing between me and a tree, followed by an Acanthylis, I saw there were two species. The new one was smaller, quite black, had no white collar, and seemed to me grayish about the head and throat, points which seem to agree with your description of Cypselus. I immediately went for my gun, but on returning they had got high, and I fired one or two ineffectual shots. Their flight and habits are, however, very different from those of Acanthylis. On the afternoon in question, and since, I have observed when there is little or no wind, they constantly practise a manœuvre I would represent by the accompanying diagram. By the dotted line I mean a beating rise; by the entire, a festooning fall; — a habit very common with the martins, but one I have never observed Acanthylis adopt. These latter birds soon collected into column; and then the numbers of the other species, about thirty, became apparent, who had not, evidently, the slightest inclination to practise a similar movement, but continued hawking in an irregular body the rest of the afternoon. I noticed a pair pursue, when the nuptials evidently took place. Their motions were extremely rapid and irregular, not unlike birds fighting; and the scream was not so shrill as that of Acanthylis, and broken into separate syllables. I have since, when here, seen them almost every evening, and for the last week have been watching for a shot, but in vain. Except at the above-mentioned time, I have never seen them, except just about an hour before sunset, when they continue hawking till they are joined by numerous high-flying bats, and the light is too uncertain to distinguish them. They generally appear about half-a-dozen together, and glide along slowly, on



motionless wings, for great distances in a straight line; for instance, they will do this for I calculate at least a quarter of a mile up and down the course of our little river. They would present an easy mark if they did not keep so high. If we watch them, while there is still sufficient light, when they pass nearest, a slight jerk of the head from side to side may be detected, but without any apparent motion of the wings: it is thus, I imagine, the prey is taken. They are the slowest in flight, and the most crepuscular of any of our swifts. I would remark that when the tail is expanded for a sudden curve it is exactly even like that of Acanthylis, whence I conclude that when closed it is slightly forked as that of the latter bird. I am still in hopes of procuring a specimen.

"On Hirundo pœciloma I have little to remark, except that they do not seem so abundant here as in the lowlands; and their appearance, though very general, is not constant. I have not fallen in with a colony hereabouts, which is remarkable, as there are the large, untenanted buildings of the thrown-up sugar estate and several caves close by. However, I often met, during last month (July), with flocks, evidently composed in part of this year's young, perched at a great height on the bare branches of forest trees, and, from the flights the whole would take, they at once remind me of our English species preparing for migration, though I certainly do not think they leave the island.

"I was extremely anxious, during my residence here, to procure further information respecting the lovely little swallow you have named Hirundo euchrysea. When I returned, in April, I was afraid, as I rode by their winter haunts, they had gone; but I soon found this was not the case: the flocks had only dispersed into solitary pairs, or at most two or three pairs together. Two pairs, I was much gratified to find, were constantly hawking round this house. They have a singular and very melancholy note, which may be rendered by 'tchee, tchee' constantly repeated, as they wheel round the house, and has become quite a part of my associations with the locality. When toying, it is repeated much quicker, and more impetuously when both birds skim round a tree or other object at a great rate. In the early morning they perch as other swallows, on some bare, exposed twig, and preen their feathers in the sun. I did not shoot more than a single specimen in April, as I was anxious to ascertain where they were nesting. I often saw them catch pieces of silk cotton, but my searches were for some time in vain. At length I saw one enter the old boiling-house. I watched for its return, and soon saw it arrive with a bit of cotton; but it refused to enter, wheeling past the aperture in the roof, uttering the plaintive cry with evident alarm. I then found that we had left the opposite door open, and a man and horse standing near it no doubt alarmed the wary little bird. The door was shut, and it entered. I then went in, and for some time could discover nothing of the hiding-place. At length it darted out of a dark corner, where there was a deep recess between the angle of the wall and roof. A negro boy I sent up found only two bits of cotton placed on the top of the wall. On returning, a week after, to my disappointment these had been removed; and though the birds were about, all my searches after their nest were in vain. I observed another pair constantly at a particular part of the road which passes through the German settlement here; but the houses were all low, and evidently not inhabited by them. Wishing to shoot one, I stopped to watch them, and then noticed they often disappeared among some bushes on a steep hill-side. I sent to examine the spot, and my expectations were considerably raised on hearing there was a cave. A pair flew round on my approaching the aperture, in evident alarm; and, concealing myself, after long waiting, I discovered they entered a small crevice in the limestone in the interior of the cave. The aperture was just large enough to admit the hand; but to my disappointment there were then (19th July) three young. They were naked and blind, the skin of a slate-gray colour. The nest, of which the hollow was not more than three-quarters of an inch deep, was a structure of considerable art. The interior was lined with a bed of the softest silk-cotton, intermingled with feathers, among which those of a green parrot were conspicuous. The foundation and external portions were composed of a flocculent substance; what it is I am not sure, unless it be silk-cotton picked off the ground, and strengthened by intermingled soil and bits of trash. With this is mixed the pappus of, I suspect, Compositæ and Tillandsiæ, but the seeds are broken off. The whole mass is intertwined with bits of Lycopodium, which, though very ornamental, is extraordinary, as in the narrow, deep hole it could not add to the concealment as in an exterior nest. The diameter was about 5 inches, the outside depth 1¾ inch. It was the only nest, apparently, in the cave.

“Yours faithfully,

“W. OSBURN.

“P. H. Gosse, Esq., F.R.S.”

Montagu's Harrier (Falco cineraceus).—All the specimens of this harrier which I have examined, from time to time, have exhibited, more or less, a variation in plumage, which the difference of age and sex suggested. A variety came under my notice yesterday which was remarkable. It proved on dissection to be a strongly-developed old male bird in very fine condition, and weighed in the flesh 10¼ oz. In the crop were portions of a hare with the fur, &c., — a fact which rather corroborates than otherwise the adult character of the bird, as the bird of the year would probably hardly attack so strong and large a prey. The whole of the plumage, both above and below, was of an *uniform deep chocolate-brown*, the only variation being that the basal portion of the tail was paler, the transverse bars just showing themselves, and the under surface of the wings the same, with four or five obscure bars; the occiput had a slight broken patch of rufous; the facial disk was scarcely visible, and the head and face had no paler markings whatever to disturb the uniformity of the umber-brown; nor in fact was there the slightest variation in this tone of colour anywhere except where I have alluded to. Any one might remark at a short distance that it looked like a diminutive young marsh harrier, which we all know is a very brown bird; but the dimensions and inferior size of the bird, with the prominent *length of the third quill-feather* and the general contour of the bird, leave no doubt as to the species. In the adult male Montagu's harrier, independently of the pale rufous longitudinal streaks on the belly and the under surface of the wings, there is a remarkable black diagonal bar across the upper and under surface of the wing; but all these peculiarities of the species in colour are of course not distinguishable in the present example, from the uniformity of the tone of colouring throughout. I may remark that in the young of this species, both male and female, there is more or less white or pale yellow about the region of the eyes; and although the plumage on the back and belly is brown, yet that on the whole of the under parts is of so light a character as to deserve the appellation of bright bay. In the marsh harrier the wings and tail are also long, but the bird is much larger and more robust, without that *slimness* peculiar to the appearance of Montagu's harrier. The third and fourth quill-feathers, too, of the marsh harrier are of equal length.—*Edward Hearle Rodd; Penzance, September* 5, 1859.

Friendly Alliance between Blackbird and Thrush.— Early in the spring of 1853 a dead thrush was found which appeared to have died from "natural causes;" and the next morning a nest was discovered which had three eggs. This nest was in a laurel, about four feet from the ground (the dead bird was supposed to be a hen). In the afternoon of that day a thrush was seen sitting on the nest. This bird was never seen off the nest for more than a fortnight. There was plenty of proof under the laurel that the nest had been very rarely left, and during the time that this thrush was so closely engaged a cock blackbird fed it very often. The hen blackbird was never seen near the nest. When the young thrushes were about a week old the cock thrush began to sing again, for no note of a thrush had been heard for more than three weeks, and even now he seemed to say, "I am too busy to sing a long song at a time." When the young ones flew the widower found another mate, and reared two more broods in the same garden that spring. After the kind attentions of the blackbird to his bereaved acquaintance were no longer needed, old feelings seemed revived, for whenever the two met on the grass the thrush invariably gave way. The blackbirds had lost so much time by these gentlemanly and Christian-like attentions that they were in a muddle the whole spring. For their first brood they took

up with the thrushes' nest of the year before without "cleansing or patching;" their second was a very slim affair, and for their third anything would do. The lady of the house laid out a heavy Vandyke collar on the grass to bleach, which was taken by these birds, and formed at least one-third of their nest. There were but two eggs in this nest, and only one of them hatched.—*Comm. by E. Newman.*

Description of the small Chinese Lark. By ROBERT SWINHOE, Esq.

> "Along the sky the music floats,
> And distant hills resound the notes."

This little songster, called in Mandarin "Proan Tien-fei," or "flying in mid-heaven," and in the Amoy dialect the "Paw-tewah," is a great favourite among the Chinese, and is generally kept in a high, cylindrically-shaped cage, made of light bamboo wicker-work, with a round, moveable, wooden bottom, fastened to the upper part by pegs; a small stick projects from the centre of the bottom about six inches, and on it is placed a piece of coral, or other rough substance, for the bird to stand on while singing or shaking his wings; and the height of the cage enables the bird to jump without fear of striking its head. Besides the usual pots for water, millet, and dried "Notonectæ," or "boatflies" (collected and dried purposely for the support of insect-eating birds), a wee bit of a cage is generally attached to the wires outside, into which live grasshoppers are from time to time inserted, and torn out as soon as seen by the bird, and devoured with evident relish. How much better the Chinese style of cage is adapted for the lark than the cage used by fanciers at home, I will leave others to judge. One thing is certain,—the captive, as he hangs in his cage suspended over some shop in the busy throng of men, sings away most merrily, regardless of all that passes below.

His congener the northern lark (*Melanocorypha mongolica*, Pall.), called the "Pile-ling," or "hundred spirits," a bird far more highly prized than our little friend, is kept in a very low-roofed wicker cage, not above three-fourths of a foot high, but having also a circular wooden bottom, with a centre projecting piece, shaped like a small round table, for the bird to stand on.

The fact of this bird being such a favourite among the Chinese makes us the more wonder how it has been so long neglected by Europeans as not even to have been described or named. When the great naturalists at home were chalking down everything that came to them from China as "sinensis," though probably brought from some isolated spot in this vast Empire, or from some distant part of Thibet or Manchuria, it is indeed a wonder that this poor little bird was passed over, and not specified with some similar name. "Sinensis" would certainly have been most erroneously applied in this instance, as the bird is not found much above this province; it is certainly not found in Shanghai; but it is abundant in various places in the neighbourhood of Amoy, and particularly so in the plains on the western side of Formosa; and I found it nestling on the high hill of Kooshan, at Foochow. How far South its range extends I cannot say. People may, however, argue that if a bird comes from any part of China it may be entitled to the name "sinensis." Such may be essentially the fact; but names are given to distinguish species, and surely most birds have some peculiarity which could afford them a name. This lark, which Mr. Blyth remarks is "probably new, but nearly akin to Alauda malabarica and to A. dulcivox of Hodgson," I propose naming Alauda cœlivox, and here give a short description of its characters.

ALAUDA CŒLIVOX, *Swinhoe.*

Descr.—The bill is dark grayish brown above, with a pale yellowish edge to the upper mandible; the lower mandible is yellowish tipped with brown. The inside of the mouth is flesh-colour, with pale king's yellow on the rim and commissure. Irides are deep hazel. Feet and claws light ochreous brown, the latter more or less tipped with brown. Upper parts yellowish brown, with a tinge of red; the central streak of many of the feathers, and the greater part of others on the head and back, being blackish brown. The quills are hair-brown, the second feather having the outer web reddish white; the other primaries edged with a redder tinge, and the secondaries more broadly with the same colour, the tips of both being whiter. The winglet is marked in the same way, but the first and second coverts are somewhat whiter. The tail-feathers are also hair-brown, the middle ones being very broadly edged with reddish brown, the others scarcely at all. The outer feathers are white, with the exception of a small basal portion of the inner web, which is brownish; the adjacent feather has also the greater part of its outer web white. There is an ochreous streak over the eye, and another from the bill below round the ear-coverts. The ear-coverts are reddish, but not more so than the top of the head. Throat, belly and vent are ochreous white. The breast and flanks are reddish brown, with a rusty tinge, the former spotted with narrow arrow-head spots of blackish brown, the latter streaked here and there with a pale shade of the same colour. The under wing-coverts are pale rust-colour. The male is much redder than the female on the under parts, and the female has speckles on the throat and face, which are wanting in the male. She is also larger, as will be seen from the following measurements, though her wings are shorter and rounder. In the breeding-season the feathers get considerably abraded in both sexes, which gives the bird a much browner and dingier appearance; but in the winter, after the autumnal moult, the plumage once more resumes its rich tints. The male, while singing on the ground, generally raises his crest, which gives him a very elegant appearance.

Male.—Bill, 5½-tenths; to gape, 7-tenths; length to end of tail, 5 inches 1-tenth; wing, 3 inches 1-tenth; tail, 2 inches 4-tenths; tarsus, 9-tenths; mid toe and claw, 7½-tenths; outer toe, 5-tenths; inner toe, 5½-tenths; hind toe, 4½-tenths, its claws over 5-tenths.

Female.—Bill, 4½ tenths; to gape, 6-tenths; length, 6 inches 1-tenth; wing, 3½ inches; tail, 2 inches 4-tenths; tarsus, 1 inch; hind-toe, 4½-tenths, its claws over 5-tenths.

The members of this genus differ so slightly in colour, that without attention to the proportions and other peculiarities it is almost impossible to distinguish them; for example, the skylark and woodlark are perfectly distinct birds at home, yet I have seen some very good bird-fanciers for a while puzzled to point out which was which. Our bird resembles A. malabarica in some degree, yet on comparison I think there are sufficient grounds to separate them.

Having said something about its colours and its affinities, let us now have an insight into its domestic habits. For this purpose we must follow it to its haunts. There is an island in the Amoy Harbour honored by the name of Whale Island, from the similarity of its profile to that cetacean; and when the day is gradually yielding to darkness, and outlines stand out more apparent, the resemblance is very complete when viewed from certain parts of the harbour. The fore part of the island is clayey, covered with loose rocks, and stones which crumble and rattle under foot, and thus make walking on it very unpleasant. Here and there a few patches of coarse grass and a few low plants occur. The middle and "flapper" part abound, on the contrary, in rich grass pasturage; and here the larks love to dwell, and rear their young. Many a by-gone Chinaman who was evidently determined to lay his bones in quiet has been deposited here, and fine large graves overgrown with grass and herbage are frequent, on the tablet-stones of which the merry lark, regardless of the crumbling remains entombed beneath him, stretches his little throat and quivers his wings as he carols to his mate; then, in the ecstasy of his joy, up he rises, and, gradually soaring higher and higher, soon becomes lost to view, though the cheerful cadence of his notes still strikes the ear of the delighted listener. The notes are rich and full, and sound delightful in the open air, especially when heard in the comparative solitude of this island; but in a house they soon become overwhelming. Leave the bird, however, where Nature intended it to be, and its song will continue to enchant as long as man has soul to enjoy.

I was only able to find one nest, on which the parent sat so close that I nearly trod on her before she bustled out and fluttered down the hill. Ensconced among the grass and almost concealed by it, lay the nest on the ground. It was placed in no hole scraped for the purpose, as the skylark places her nest, but knit among the roots of the grass. The outside was composed of roots and coarse grasses; the inside was somewhat shallow, and lined with finer stems of grass. In it were deposited three eggs, varying but slightly in size, shape and colour; one that I brought away with me measures in width 7-tenths, and in length 8½-tenths; it is of a pale brownish hue, with numerous spots and blotches of umber-brown, smaller and scarcer at the lesser end, but disposed in almost a mass at the larger. The young are constantly exhibited for sale in the streets during the breeding season, and are reared by the Chinamen on a creamy substance called bean-cake, until they are able to feed themselves. In their markings they a good deal resemble the young of the skylarks.

The nestling has the inside of the mouth of an orange-chrome, which as the bird grows to full size pales into flesh-colour, with light yellow on the rim of the beak; the irides are umber. The feathers on the upper parts are smaller and rounder than in the adult, fringed with light ochreous yellow. The margins of the wings and tail are not so rich. The under parts yellowish white, and the pectoral band more ochreous yellow, with indistinct spots of blackish brown. Feet pale flesh-colour.

In autumn, when the season of incubation has come to a close, they herd together in flocks, though never in any great numbers, and may be seen all the winter through, in companies of twenty or thirty, in the fresh-ploughed fields or stubble, on which it is very difficult, nay almost impossible, to see them, from their being so much the colour of the ground. I have often walked quietly up to a spot where

I but a moment ago saw a flock alight; and I have never been able to get a glance at them on the ground. On my approach they would spring up, several at a time, uttering the lark note, and rapidly remove to a further part of the field, or would ascend into the sky, and after fluttering round and round come down with quick descent to some chosen spot. They seldom hovered much, as at the season of courtship they so love to do.

Varieties of this lark occur with patches of white on various parts of the body. I have an individual alive that has a good deal of white on most of the feathers of the wings and tail; and a bird formerly in the possession of a Chinese bird-fancying merchant here, but which he subsequently presented to me, is entirely white, with reddish eyes, and pallid beak and legs; in fact, a perfect albino.

The name of the lark is one of the few names used by the people here to distinguish birds; and when a countryman meets you on the hills, returning home with the produce of your morning's chase, with the prying curiosity so habitual to his race he examines the burden in the hands of your game-carrier, and pronounces all the birds of a brown colour—be they pipit, finch, or any other species—to be larks: to him they are all "Paw-tewahs." His first question then is, for what object the foreigner shoots, for the pot? When told for amusement, he immediately points to a flock of sparrows or a passing crow, and is extremely disgusted with the foreigner's prowess if he does not devote one or other of these luckless creatures to the amusement of the gaping booby. The majority of these questioners go on their way incredulous, and fully persuaded in their own minds that the specimens are intended to satisfy the voracious appetite of the stranger; for the Amoy Chinaman, more than the rest of mankind, harps on the gratification of his appetite, as may be gathered from the mutual salutation when friend meets friend. "Have you dined?" is the greeting question; and the response is, "I have eaten my fill," or "Not yet," as the case may be. I give this as a closing episode to my notes on the lark merely to show that you may look for help in vain from your Chinese friends in ornithological pursuits. The Chinaman cannot understand your object. He quietly laughs to himself, and thinks the indefatigable naturalist a great fool for his pains.

ROBERT SWINHOE.

British Consulate, Amoy,
July 1, 1859.

Occurrrence of the Sand Grouse (Syrrhaptes paradoxus) *in Wales.*— A fine male of this rare bird was shot in a turnip field at Portreuddyn Farm, near Tremadoc, on the 9th of July last. It was observed, together with two other birds of the same kind, by a farm labourer in the employ of T. Chaffers, Esq., of 14, Great Howard Street, Liverpool, while "scuffling" the turnips. Fortunately he was provided with a gun for shooting rooks; but, it being single-barrelled, he was unable to kill more than one bird. This was kindly forwarded to this Museum, while still in the flesh, as a donation, by Mr. Chaffers; it was shot in the head, and only one or two feathers were displaced from the crown; it has been very successfully stuffed by Mr. Butterworth, of this town, and is now open to the inspection of visitors. The two birds that escaped flew off in an easterly direction towards Merionethshire; and Mr. Chaffers has been unable to obtain any information of their having been observed either before or since. This species, which is rare in Museums, inhabits the plains of Tartary; and its occurrence in Britain is an event the importance of which is greatly enhanced by the fact of its claim to be an European species having previously been doubtful. It is included in the European list by Prince Bonaparte in his 'Geographical and Comparative List of the Birds of Europe and North America,' but is omitted by Gould, Temminck, Schlegel and Degland. I have been informed by Mr. Sclater that he has examined a specimen of the above species shot lately in Norfolk, and that he has heard also of another. These and the birds observed in Wales doubtless originally belonged to the same flock. What special influence has this year caused them to wander so far from their native land?— *Thomas John Moore; Free Public and Derby Museum, Liverpool.*

Notes on the Wood Sandpiper and Dunlin.—On the 11th instant my brother and I were on our sands on the look-out for whimbrel, when we noticed among a small flock of the summer snipe (*T. hypoleucos*) what seemed a decided stranger. This bird soon separated himself from his companions, and alighted on the mud close to us, uttering at the time a strange and dissonant cry, which my brother not inaptly compared to the noise made by a person whistling into the tube of a key. This note sealed the bird's death-warrant, as at my request my brother walked forward and shot the bird, which unsuspiciously allowed him to get near to it, jerking its head backwards and forwards all the time in the peculiar manner of the Tringæ,—a motion which suggests to one that the birds have either very creaky necks, or else something wrong with their internal arrangements. When my brother brought me the dead bird, from the very ochreous colour of the legs I at first thought I had become the lucky possessor of a yellowshank; but a closer examination proved the bird to be a wood sandpiper (*Totanus glareola*) in adult plumage. When I skinned the bird (a male) I found it to be in very poor condition; and I fancy its thinness indicates that it had just accomplished a migration. Its stomach was full of a sandy grit, amongst which I found several small white larvæ and fragments of minute Crustacea. I have since heard that another specimen of the wood sandpiper has been obtained in our neighbourhood, very likely the companion of the bird I have. If any naturalist wishes to amuse himself by contemplating the habits of that pretty little Tringa the common dunlin, now is the time for him to visit the sand-flats. The birds are now coming to them in great numbers from their breeding-stations on the moors; and the young birds, for the first month or so, are so very tame and confiding that they may be watched very readily at a close distance. On a hot morning large flocks of these lively birds may be noticed squatting lazily on the sands, and none of them will think of raising as you walk among them. Take care, or else you will tread on some of them. Perhaps one or two of the little fellows will run on before you; the majority (whose plumage at this time of the year wonderfully matches the colour of the sand) will squat close, a few of them yawning, and stretching their wings every now and then vertically above their backs (another common habit peculiar to the Tringæ). A few of them, not quite so lazy, you may see within a few inches of your feet, prying about for sand-worms and small Crustacea. See! that lucky fellow has just seized a fine worm; but, epicure as he is, he runs down to the retiring waters first of all, and gives the worm a rinse or two before he swallows it. Another fellow wades out boldly into the water, and when out of his depth swims about a little, and when he comes out sits quietly on the sand close to you, and regularly preens his feathers. A gentleman told me that once, as he was watching a flock of these little birds, one of them came up to him, and examined the sand which was clinging to his boots for insects! These little fellows are extremely affectionate, and will squat close to a wounded companion, until you fancy you are going to pick up an uninjured bird, when, just as your hand is on the point of seizing them, up they fly, and dart off with their zic-zac flight, and shrill cry, "Sesteely, sesteely!" While watching these little birds and other of the Tringæ, it has often struck me how unnaturally these birds are generally to be found "mounted" in collections. *There* you will see them with their legs and necks stretched to the uttermost, and looking either as if they had been racked or drilled by some martinet. On the sand these birds seem to have scarcely any necks at all, and their bodies are low down close to the ground, looking very round and puffed out; the beak generally with its tip almost resting on their porrected breasts. Altogether they look very much like jack snipes appear when they are standing still on the ground and meditating. I am afraid the Editor will think this is a great deal to have to say about such a common, unassuming little bird as Tringa variabilis; but I fancied a few remarks from one who is fond of watching these pretty little Tringæ and their habits might be acceptable to those who have not lately visited a sand-flat.—*Murray A. Mathews; August* 14.

[The Editor does not think the observations on the dunlin at all *de trop*, and he fully sympathises with his contributor's observations on bird-stuffing.—*E. Newman.*]

The Hawfinch at Selborne.—On Saturday last, the 27th of August, I picked up on my lawn the wings and a few other feathers of a hawfinch, which had doubtless been killed by a cat. This is the fifth instance I have known of the occurrence of this species in our neighbourhood; and I thought the fact worth recording, particularly with respect to the season of the year.—*Thomas Bell; September* 1, 1859.

A Sea Monster.—Captain John Dunn, of the schooner 'Rover,' on a trip from Quebec to Belle Isle, reports as follows:—"On Saturday, the 20th of August, in lat. 59° 14′ N. long., 59° 10′ W., at 4 o'clock A.M., weather fine, saw something like a vessel bottom up, S.E., about three miles distant; bore down to ascertain what it was, and on approaching close to it could discern something like the bow of a clinker-built vessel bottom up, showing the rows of planks apparently the same. About what seemed to be the head noticed a great deal of red. Bowsprit apparently under or in a wash with the water. On nearing on the larboard side saw something snow-white on the centre of the body. Brought the schooner close alongside, and to our great astonishment found it to be a living monster. The large part of the body, or shell, was about fifty feet long and sixteen feet high, conical shape and sharpening to the fore part, with a long neck, and jaws about fourteen feet from the body. At the junction of the neck with the body was a large horn. It had large white fins, something like the wings of a bird, under the middle of the shell. We were scarcely thirty feet distant when we saw the head come above water and turn towards our boat, when we hauled off, tacked, and stood in on the other side for a further survey. The right fin was more under the water than the left, and the horn we could see distinctly. It was very long and blood-red. The neck and head again moved towards the boat, when we got somewhat alarmed, and made all sail from this floating monster. We counted the streaks from the centre of the back to the water fifteen to a side, and the top of the shell was partly covered with birds' dung. The shell was of a dark colour, and came down in wash with the water. Under the shell we could plainly see a curve, and then a second projection. The hind part very much the shape of a turtle, but the fore part was sharper. At 5.30 A.M., soon after we hauled off, saw an American schooner passing very close to it".—*Quebec Chronicle. From the 'Times' of September* 22.—[*Communicated by Mr. Gosse, who adds the following apposite note.*]

What shall we say to *this* new American story? My first idea on reading it was that of a rorqual, dead or nearly dead, floating belly upward. The plicæ of the throat and belly would be the semblance of the planks of a clinker-built craft. The length and height would agree well enough, especially if we suppose the small of the body and the tail to have been under water. This, too, would make the pectoral fins come near the middle of the (visible) body, and their white hue would agree with their reversed position. It might have been mortally wounded in some of those misadventures which whales are liable to, perhaps having run a tilt against some ship, as a cachalot once did to the good ship 'Essex;' and if so, there might well be "a good deal of red about the head." 'Tis true this hypothesis will not account for the neck and jaws, "about fourteen feet from the body," nor for the large horn, "very long and blood-red," at the junction of the neck with the body. May the latter have been the *membrum virile*, a little mis-stated as to position? And may we take the liberty of supposing that possibly the two extremities of the body may have been confounded, and that the flukes of the tail-fin, indistinctly seen in the wash of the sea, were the "jaws," and the small of the body the "neck"? In this case the "red about the head" would require some other explanation. I may add, from my own observation, that rorquals are quite common in that part of the Atlantic alluded to. Of course much allowance must be made for imperfect observation and still more imperfect description, for the influence of surprise and terror, and for a natural love of the marvellous. Whether, with this allowance, my hypothesis is tenable, I leave you and your readers to judge. I am far from thinking that Science has yet chronicled *all* the monsters that "make the deep to be hoary;" but I doubt whether this was one of the "great unknown." Pray keep a sharp look out for the report of the American schooner.—*P. H. Gosse; Torquay, September* 23, 1859.

A new British Snake.—The Hon. Arthur Russell has sent to the British Museum a specimen of the female Coronella austriaca, which was taken by a resident near the flagstaff at Bournemouth, Hampshire,—the habitat of the larger heath lizard (*Lacerta sterpium*). These species are found together not uncommonly, and generally distributed over Europe. The snake is said to live on the lizard. This is one of the most interesting additions to the British Fauna which has been made for many years, as it is not common to find a new vertebrate animal, except occasional visitants. This snake has small scales, is brown, with two lines of darker spots down the sides of the back, a dark blotch on the shoulder and head, and a blackish streak under the eyes. It is like a viper in size and general appearance, but wants the dark lozenge-shaped spots on the back.—*John Edward Gray; British Museum.*

[The following brief description of this interesting addition to our Fauna may possibly be acceptable to my readers: my authority is Lord Clermont's admirable little work intituled 'Quadrupeds and Reptiles of Europe,'—a work that I am very glad to have this opportunity of heartily recommending. "The Coluber austriacus is identical with Coronella austriaca of Dumeril and Bibron, vol. vii. p. 610, and it is also the Coluber lævis of Schinz, vol. ii. p. 45. It never attains a very large size, its entire length being about two feet. The head is but slightly distinct from the body; the tail short, and strong at the base; the eyes small; the rostral plate presses much upon the muzzle, and is of a triangular form, with its top pointed; there are seven labial plates on the upper lip on each side, the third and fourth of which touch upon the eye; scales of the body smooth, rhomboid, in nineteen longitudinal rows; ventral plates 160 to 164; subcaudal 60 to 64 pairs; one anal plate divided; the upper maxillary teeth are on the same line with the others, and longer; the upper parts are greenish brown, with two parallel rows of black markings along the back, more distinct towards the head than in the hinder portion; sometimes the spots on the back are small and few in number; the lower parts have a lighter ground colour, but are often much darkened by black marblings. It inhabits central and southern Europe, is found in various parts of France, but is not very common in the south of that country: it occurs in Sicily, and in the whole of Italy and its islands, but is more frequent in the north than in the south of that peninsula; it is included in the Fauna of Gallicia and the Bukovina, Silesia and Carniola: it is common in Switzerland near Zurich; but rare in Belgium, where it has been met with near Louvain, and on the right bank of the Moselle: Schinz states that it has been found in Sweden, but it is everywhere less abundant than our common snake (*Coluber natrix*)."—*E. N.*]

Occurrence of the Plain Bonito (Auxis vulgaris) *in the Moray Firth.*—A very fine male specimen of the above rare fish was captured off Cullen, Banffshire, on the 7th inst. It was taken in a herring-net. It measured over 20 inches in length and 12 in circumference behind the first dorsal. One very peculiar feature connected with it was that if stroked down when wet it gave the hand all the appearance of having come across a piece of metal newly black-leaded. I am not aware of this peculiarity being mentioned in Yarrell or elsewhere.—*Thomas Edward; Banff, September* 17, 1859.

Spider and Wasp.—In the autumn of 1858, Dr. Howard, of Sandgate, wishing to observe what a large Diadem (or garden spider) would do if a wasp were put into his web, took one by the wings and entangled it by the feet. The spider immediately made a rush at it, when it turned and transfixed the spider in the belly with its sting. On this, the unhappy spider doubling up, fell from his web dead upon the ground, and the wasp, getting up, flew away. Dr. Howard thought that the spider had been merely paralyzed or was shamming dead, so kept him until the next morning, but he never revived, and showed clearly how deadly the venom of the wasp must have been.—*Charles Horne; Sandgate, September* 2, 1859.

Occurrence at Brighton of Lycæna bætica, a Butterfly new to Britain.—I am indebted to Mr. Thomas Thorncroft, of 87, North Lane, Brighton, for the information that a new butterfly was taken near the chalk downs, on the 5th of August last. My son being at Brighton at the time had an opportunity of seeing it, and Mr. Doubleday has since determined the species. The fortunate captor is Mr. McArthur, of Brighton. The species is common on the Continent, and, simultaneously with its appearance at Brighton, was seen in profusion along the northern coast of France and in the Channel Islands, so that its occurrence here does not appear extraordinary; nevertheless, it can only be regarded, like Pieris Daplidice and Chærocampa Nerii, a purely casual visitor, and, like those, it should be kept perfectly distinct from our truly indigenous insects. It is a dull brownish insect, above and below has waved markings, rather like those of a Thecla than the spotted appearance of a Lycæna. Each of the hind wings has a short but very distinct tail, and near the hind margin of each hind wing are two small, but very distinct, rounded red spots.—*Edward Newman.*

Captures of Varieties of Colias Edusa at Brighton.—Since the 12th of this month, Mr. George Smith, of No. 33, Marlborough Street, Brighton, and myself, have captured nine very fine specimens of the light variety of Colias Edusa and two of the small variety called Colias Chrysothemene.—*John Meiklam; 97, King's Road, Brighton, August* 19, 1859.

Colias Edusa and Sphinx Convolvuli.—The accounts of captures of these insects are too numerous to insert; their appearance has been general.—*E. N.*

Capture of Sesia Chrysidiformis near Folkstone.—I captured in the middle of last July, on the Undercliff between Dover and Folkstone, a beautiful specimen of Sesia Chrysidiformis. This was captured near the same place in 1855, according to the 'Entomologist's Annual' for 1856. Mr. Haworth had only seen a single specimen, and this of Mr. Wratislaw's makes the sixth known or asserted to have been captured in Britain.—*A. H. Wratislaw; School Hall, Bury St. Edmund's, August* 8, 1859.

[This insect was formerly rare, but has lately been proved to be only local: about thirty specimens have been taken this year and as many last, at the spot mentioned by the Rev. Mr. Wratislaw.—*Ed.*]

Description of the Larva of Limacodes Testudo.—Formed like a wood-louse; the upper or exposed portion being an oval-arched carapace resembling that of a tortoise, or perhaps still more closely the segmentally-divided carapace of a Chiton; this carapace has two longitudinal waved raised ridges and a margin which is reflexed in front, and its whole surface is delicately shagreened: the head and anterior segments are retractile beneath the carapace, and these segments as well as all the under surface of the larva seem to possess a mucous or adhesively glutinous covering or skin; there are six articulated but rather short legs, as usual in Lepidoptera, but singularly enough they do not appear to be used in locomotion; there are no claspers, the entire under surface of the larva is prehensile, and the larva moves forward by an undulating gliding motion like a slug; this gliding is equally well performed on a rough surface and on the most polished glass, and either in a horizontal, perpendicular or inverted position, indeed on the oak-leaves, its ordinary resort, it is usually found in an inverted position. The colour of the carapace is a light delicate green, the two dorsal ridges and the margin being pale yellow; on the inside of the dorsal ridges are nine oblong crimson spots, and between each pair of crimson spots is a pair of transverse linear yellow spots placed end to end, the two having almost the appearance of a continuous line; intermediate between each transversely-placed pair of spots are a pair of longitudinally-placed smaller spots, exactly of the same colour: on each side of the larva below the dorsal ridge are three longitudinal series of pale yellow dots, the upper series of which have a dark green stigmatiform centre: I do not detect real spiracles in any part of the carapace, and suppose them to be concealed by its projecting margin. This larva feeds on the oak. The family to which this singular larva belongs is of great extent in India and has a few representatives in North America and Australia. In Europe there are but two species, the present insect and a smaller one, Limacodes Asellus. This natural order is perhaps the most distinct that has yet been eliminated from the vast and closely interwoven class of insects called Lepidoptera: it is to be regretted that no characters have yet been discovered distinctive of the imago.—*Edward Newman.*

Discovery of Clostera Anachoreta in England. — I am pleased to record my fortunate capture of eleven larvæ, ten of which reached the imago state and proved to be Clostera Anachoreta; a pupa found by a friend after I knew what it was, and presented it to me, also came out. I can at present give no locality for it nearer than "the home-counties," for several reasons, not the least of which is the certain inundation of the spot by persons collecting for profit, &c. I attempt a description of the larva, which, being very attractive in appearance, would not be easily overlooked:—Covered slightly with yellowish hair; a pale buff broad dorsal band extends longitudinally; below this on either side is a slaty black band, with some dull orange spots, and beneath this the prevailing colour is orange, the spiracles and spots above being brighter. The head is black, the fold before it being dull orange. On the fourth segment is a dull pinkish red tubercle, surrounded by a black patch, in which on either side of the hump is a very conspicuous pure white spot, the hump or tubercle appearing considerably larger when the larva is in repose or in fear; a second smaller and similar tubercle is placed on the anal segment. The larva appears to be, to a certain extent, gregarious when full-fed; when young it feeds in companies. It spins a brownish cocoon, and when about to turn to the pupa, the anterior part assumes a bright green colour; the pupa is at first green anteriorly and yellowish brown posteriorly, but soon changes to black.—*H. G. Knaggs; 1, Maldon Place, Camden Town, N. W., September*, 1859.

A new British Noctua: Leucania putrescens. — Early in July I took, flying over bramble blossoms, three Noctuæ which nobody here could make out. I sent one of them to Mr. Henry Doubleday, who writes that "it is certainly new to Britain, and extremely near to Leucania punctosa and L. putrescens."—*R. M. Stewart; 3, Park Place, Torquay.* [A specimen of this insect has been forwarded to me, to be named, by Dr. Battersby, of Torquay; it was taken at dusk, in the middle of July, hovering over the blossom of the blackberry, on the cliffs. I presume this is the insect taken by Mr. Stewart, and this is undoubtedly L. putrescens. L. punctosa is a redder insect, with a less distinctly marked black streak from the base of the wing. L. putrescens is a native of the South and West of France. Herrich-Schäffer and Guenée both place it next to L. obsoleta.—*Ed. ' Intelligencer.'*]

Capture of Hadena peregrina in the Isle of Wight.—I have much pleasure in recording the capture of a second specimen of the above insect: I took it on the 23rd ult., at sugar, within a few yards of the place where Mr. Bond captured his specimen last year: it is a female and in beautiful condition. I am indebted to the courtesy of Mr. Doubleday in naming the insect.—*R. MacLachlan; 1, Park Road Terrace, Forest Hill, September* 7, 1859.

Xanthia gilvago, &c.—I have again bred a few specimens of this insect from the larva. I am unfortunately unable to give a description of it, farther than to say that it so closely resembles that of X. ferruginea that I cannot separate it. Both feed on the seeds of the wych elm, and it is impossible to distinguish them at that early stage —at least, I cannot. In the 'Intelligencer' (vol. ii. p. 94) I gave a description of what I then supposed to be the larva of X. gilvago: it turned out to be X. ferruginea. However, the description there given will answer equally well for X. gilvago, so far as I can judge at present. My specimens of the perfect insect, which differ much from others that I have seen, are small, which I account for in the following way. The seeds of the wych elm appeared a fortnight earlier than usual, owing to the uncommon warmth of the season. This warmth was followed by a sudden and protracted frost, and the seed perished by wholesale. It was, therefore, with the utmost difficulty that I could supply them with food, since, as far as my experience goes, they will not eat the leaves. For the same reason, I doubt not, I have been unable to find a single pupa. I have bred a fine series of X. cerago, from the catkins of the sallow, and shall be happy to supply, as long as they last, any collector with bred specimens of it, or any of the following, *viz.*, X. silago, Trichiura Cratægi, Hypogymna dispar and Tethea subtusa.—*J. Greene; Cubley Rectory, Doveridge, Derby.*

Description of the Larva of Eupithecia absinthiata.—It would be impossible to give an accurate description of the almost endless varieties of this most variable larva; they run so closely into each other that it would be an almost Herculean task to separate them. The ground-colour is either yellowish green, deep rose-colour or dirty reddish brown, with a series of reddish lozenge-shaped spots down the centre of the back, generally becoming faint or confluent towards the head and tail. In the green variety these spots are often entirely wanting. On each side a number of narrow, slanting, yellow stripes, forming a sort of border to the dorsal spots. Spiracular line waved, yellow. Body wrinkled, thickly studded with minute white tubercles, and somewhat more sparingly with short white hairs. Segmental divisions yellow, thick and stumpy, tapering but little. Feeds from the end of August to the beginning of November, upon the flowers of common yellow and hoary-leaved ragwort (*Senecio Jacobæa* and *S. crucifolium*), the hemp agrimony (*Eupatorium cannabinum*), the mugwort (*Artimesia vulgaris*), yarrow (*Achillæa millefolium*), golden rod (*Solidago virgaurea*), &c. The pupa, which is encosed in a tightly-spun earthen cocoon, has the wing-cases bright green, the nervures very prominent; thorax yellowish green; abdomen reddish yellow, with a dark green dorsal line. The perfect insect appears in June and July.—*H. Harpur Crewe; Breadsall Rectory, Derby, September* 6, 1859.

Description of the Larva of Eupithecia denotata.—This larva, in size and general appearance, closely resembles that of E. innotata. It is long, rather slender and tapering towards the head. There are two varieties: *var.* 1 is green, with three purple dorsal lines, the centre one broad and distinct, expanding considerably on the anal segment, the two side ones very indistinct. Head and prolegs purple. Segmental divisions and spiracular line yellowish. Belly green. Back studded with a few minute white tubercles, interspersed here and there with a black one. *Var.* 2 is of a uniform purple, with two lines of a deeper shade on each side of the back. It feeds, as far as my experience goes, exclusively on the flowers and seeds of the lesser Burnet saxifrage (*Pimpinella saxifraga*), and is full fed throughout the month of September, and occasionally at the beginning of October. It prefers the hedge-sides and banks. It is fearfully infested with ichneumons, not above one in ten escaping. The pupa is enclosed in an earthen cocoon: there are two varieties; the one yellowish green, the other red. The perfect insect appears at the end of June and in July. The larva is by no means rare in the Eastern Counties; I have also taken it in Derbyshire.—*Id.*

Mr. Gregson's Criticism on the Description of the Larva of Eupithecia assimilata.—I have just been reading Mr. Gregson's strictures (Zool. 6695) on my description of E. assimilata, and I can assure him, with no unfriendly spirit, he must not fear any accusation of presumption from me. I am well aware of the labours he has bestowed upon the genus Eupithecia, and I feel that perhaps no one has so much right to criticize as himself: I only wish he and I were located nearer each other, so that we might have much Eupithecian talk and many a Pug-hunt together. I must, however, stand up in my own defence, and maintain the accuracy of my statements. First, with regard to size, I know not whether there is anything in the soil in the neighbourhood of Liverpool which causes the larvæ of E. assimilata to attain gigantic proportions, but in these parts they certainly do not increase in stature according to Mr. Gregson's ratio. Last autumn I took between forty and fifty larvæ. Some were ichneumoned, it is true, but the rest certainly were not sickly; they fed well, spun well and turned well, and they were all about the size of the one from which I took my description. But then these were taken in the middle of October, and this Mr. G. says is too late to form a correct idea of their size. However, yesterday (September 6th) I took a stick and umbrella into the garden, and thrashed the black-currant bushes; twenty-six larvæ, of all sizes, were the fruits of my labour: those that are full fed are no longer than those I took last October; some have already turned pink, preparatory to spinning up. Secondly, with regard to the dorsal markings: out of toose I took last autumn some three or four had a few small black specks along the central dorsal line, and this was the only approach to a dorsal marking or lozenge-shaped spot which any one of them showed: all the rest were a uniform green colour. All the larvæ I took yesterday are green, without a spot or speck. In some localities almost all the larvæ of Smerinthus Populi are studded with large rust-coloured spots, whilst in others this variety seldom or ever occurs. May not the same be the case with the larvæ of E. assimilata?—*Id.; September* 7, 1859.

Mr. Gregson's Criticism on the Description of the Larva of Eupithecia assimilata.—I read, with very considerable surprise, Mr. Gregson's remarks (Zool. 6695) upon Mr. Crewe's description of the larva of this insect. Mr. Crewe is well able to defend himself, and needs no advocate in me; but I wish, on my own behalf, to express my entire dissent from the statements somewhat dogmatically set forth by Mr. Gregson. He objects, *first*, to the length given by Mr. Crewe (three quarters of an inch), affirming that his specimens are double that size! A Pug larva an inch and a half long I have never seen; possibly that of E. togata may be so, but E. assimilata is certainly to be ranked among the small species of this genus. *Secondly*, he objects to the time specified by Mr. Crewe: the period for the appearance of larvæ varies, as every one knows, according to localities and the backward or forward state of the season. *Thirdly*, he finds fault with the description of the dorsal markings: "When he speaks of a dorsal line, no one would suspect that he was describing the lozenge or diamond-shaped markings which are so conspicuous an object in one or two groups of this genus, and particularly so in E. assimilata." These are the three particulars in Mr. Crewe's description objected to by Mr. Gregson. I am prepared to support Mr. Crewe in every point. I took a considerable number of the larvæ last year, at precisely the same period as that named by Mr. Crewe, from which I bred a fine series this spring: I made a carefully coloured drawing of the best marked specimen at the time, and find it to agree, in the minutest particular, with the description given by Mr. Crewe. "No one would suppose," says Mr. Gregson, "that Mr. Crewe was describing the lozenge or diamond-shaped markings, which are so conspicuous an object in one or two groups of this genus, and particularly so in E. assimilata." I will undertake to say that Mr. Crewe would be much surprised if any one *did* suppose it. I have at this moment some half-fed larvæ before me, and I can unhesitatingly affirm that, neither in its youthful or full-grown stage, is there the slightest trace of anything like diamond or lozenge-shaped markings. With regard to the time, as I have already said, that varies according to circumstances: I have some already "gone down," others about half fed, and this morning (September 5th) I have beaten some, evidently only just hatched, so that there is no occasion to suppose that Mr. Crewe was "evidently describing poor, half-grown, sickly larvæ." Lastly, with regard to size, Mr. Crewe is not to be understood as saying that every single specimen is exactly three quarters of an inch, and no more, but that that is the average length, and I quite agree with him, as no specimen that I have seen has exceeded one inch, at the utmost; but perhaps the Lancashire measurements are different from ours. My firm impression is that Mr. Gregson's insect is not E. assimilata at all. I may add that the description in the 'Manual' (vol. ii. p. 89) and the 'Intelligencer' (vol. i. p. 203), as far as they go, tally exactly with that given by Mr. Crewe. In the sixth volume of the last-named work (p. 64) is a communication facetiously representing the 'Zoologist' as the "heavy coach" of Entomology, and, from his signature of a "Fast Man," we are led to infer that the writer considers the 'Intelligencer' as the "light" or "fast" coach. There is an old proverb, "Most haste, worst speed,"—a proverb applicable, in my opinion, to many of the communications addressed to the 'Intelligencer,' and to none more so than Mr. Gregson's so-called descriptions of the Eupitheciæ. I should not have made this remark were it not that Mr. Gregson takes such a "patronizing" tone. Compare Mr. Crewe's elaborate and minute descriptions with those of Mr. Gregson. The 'Zoologist' may be a "slow" coach, but it is "steady," and I have no hesitation in expressing my conviction that we have not, in any entomological work whatever, such accurate and careful descriptions of the larvæ of the Eupitheciæ as those recently given by Mr. Crewe. Mr. Gregson seems to think that no one breeds Pugs but himself. If I mistake not, Mr. Crewe has descriptions of twenty-three species, and I myself have bred eighteen, and am making drawings each year of all I meet with.—*Joseph Greene; Cubley Rectory, Doveridge, Derby.*

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Capture of Emus hirtus in the Isle of Sheppey.—Accompanied by Mr. Lewis, one well initiated in the mysteries of insect haunts, I started yesterday morning on an excursion through the Isle of Sheppey, designing to hunt up certain interesting species of Coleoptera, which that fertile locality is known to present. After much futile labour for a well-known rarity, the main incentive of our visit, I happened by a fortunate chance to cast my eye on a bank sloping to the sun. There, wriggling in a mass of dried cow-dung, I caught a hasty glance of a creature clothed in long golden hair, and having the appearance of a large Bombus. It immediately occurred to me that a bee wallowing in dung was somewhat incongruous, and at the same moment I arrived at the conclusion that it could be no other than Emus hirtus. My companion was sceptical, which did not surprise me, and after assisting in the hunt left me. In faith of the correctness of my conviction, I continued digging for about ten minutes, and at a depth of about 8 inches, succeeded in turning out a beautiful and perfect specimen of this rare and conspicuous insect. Having preserved my specimen alive for observation, I would first remark the rapacious manner in which its powerful maxillæ are brought into play to destroy whatever opposes it. The cork of the bottle in which it was stored was so excavated that, if undisturbed, it would doubtless have effected its escape. Being enveloped in the *débris*, I was next interested in observing how effectually every particle was removed, by elevating the hind legs and passing them by a comb-like process over the upper surface of the body. The insect being in the constant habit of unfurling its wings, I observe that they are strongly nerved and so long as completely to cover the abdomen. This seems to indicate that, like certain of its allies in this group, its habit is to fly in the sunshine, from one patch of dung to another, in search of its prey.—*Alfred Haward; Gloucester Road, Croydon, September* 23, 1859.

To Entomologists.

MR. J. C. STEVENS begs to announce that he has been favoured with instructions to SELL by AUCTION, at his Great Room, 38, King Street, Covent Garden, early in November, the valuable and important ENTOMOLOGICAL COLLECTIONS formed by the late Dr. THOMAS HORSFIELD, F.R.S., L.S., &c., Librarian to the East India Company; together with the Cabinets in which they are contained. Catalogues are preparing, and will be ready ten days before the sale.

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